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AUTHOR Tutin, Judith; Kessler, Marc
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ABSTRACT

It has been estimated that the most pressing problem in community mental health care clinics is dropout, defined as unilateral termination by the client without therapist approval. To clarify the nature of dropout patients, 133 outpatient records at a rural community mental health center were examined over a one year period. Variables expected to predict dropout status were coded and reduced by factor analysis. Discriminant analysis revealed that short term dropouts (two or fewer visits) could be discriminated from long term dropouts (three visits or more), confirming that dropouts are not a heterogeneous group. Short term dropouts tended to be less likely than long term terminators to report a disturbance with their child, more likely to report a sleep disturbance or sexual dysfunction and more likely to have a complaint longer in duration. Comparisons of short term dropouts to short term terminators showed that the therapist's role was more significant. The findings suggest that the dropouts meet their treatment needs in a short term manner. (JAC)

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A Multivariate Analysis of Termination Status in a Rural Community Mental Health Center

Judith Tutin and Marc Kessler

University of Vermont

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A Multivariate Analysis of Termination Status in a Rural Community Mental Health Center

In a 1977 article published in the Community Mental Health Journal it was estimated that the most pressing health care delivery problem among community mental health center outpatient clinics was the drop out rate (Albers & Scrivner, 1977). Dropout (or premature termination) has been defined by Garfield (1978) as a termination which is initiated by the client before there has been a mutual agreement with the therapist that therapy has been completed. The rationale for the continued study of this group is based on three major premises:

1. Much of the literature suggests that low socioeconomic status clients drop out of therapy more often than do high socioeconomic status clients (Garfield, 1978);

2. There is concern that dropouts are not actually achieving their short-term treatment goals, but rather that they are difficult to engage in treatment and are frustrating to work with (Kline & King, 1973);

3. Dropouts constitute a problem in that full time for evaluation is required but they do not continue to an appropriate termination of treatment (Bowden, 1980).

The lack of consistency among studies designed to predict client dropout from psychotherapy precludes drawing confident conclusions regarding the nature of the premature terminator (Baekeland & Lundwall, 1975; Brandt, 1965; Garfield, 1978). One criticism of the early research was the dependence upon univariate statistical analyses which limited interpretation of results (Fiester & Rudestam, 1975; Sue, McKinney & Allan, 1976).

Another flaw in previous research became apparent when Fiester, Mahrer, Giambra and Ormiston (1974) demonstrated that dropouts were not a homogeneous group. They found that short-term dropouts differed from long-term dropouts; the short-term group was less sociopathic, more neurotic and less in need of further treatment than the long-term group, findings which were contrary to the earlier dropout literature. In a 1975 study Fiester and Rudestam incorporated the lack of homogeneity finding and compared short-term dropouts to long-term terminators. This was the first study to apply multivariate statistical techniques to the problem. They concluded that the therapist's role in the initial interview was the most crucial factor operating to distinguish dropouts from terminators. Since a comparison of short-term dropouts with long-term terminators confounds dropout status with length of service, it is necessary to compare dropouts with terminators in the short term using a multivariate analysis similar to that employed by Fiester and Rudestam (1975).

The present study was designed to further clarify the nature of the dropout. The hypotheses were the following: 1) short-term dropouts will differ from long-term dropouts as in the Fiester et al. (1974) study; 2) short-term dropouts will differ from long-term terminators, replicating Fiester and Rudestam (1975); and 3) short-term dropouts will differ from short-term terminators.

Subjects

All outpatient records at a rural community mental health center were examined for a one-year period from August 1, 1980 to July 31, 1981. All clients meeting four criteria were included; age between 18 and 69,

attended at least one appointment, not seen for evaluation only, and primary care worker a non-psychiatrist. Of the resulting 166 cases, 33 were excluded. Thirty had not signed a standard clinic release of information and consent for research form, two had no available recent intake forms, and one client died after starting treatment. Of the 133 remaining cases, 78% were diagnosed as adjustment reaction or adjustment disorder and none were diagnosed as psychotic (see Table 1 for characteristics of the sample).

Procedure

Variables expected to predict dropout status were coded from routine forms available in client records. Nine demographic variables were provided by clients upon admission; seven variables related to type of admission and complaint and 20 dichotomous symptom variables were provided by the therapist after the first session. Each client was seen by one of nine therapists. The present analyses included four therapist-derived variables for each case; the therapist's score on the Lerner Scale of Democratic Values, a measure of authoritarianism (Lerner, 1973) and on the Community Mental Health Ideology Scale, a measure of commitment to a community mental health orientation (Baker & Schulberg, 1967), whether the client saw a sex-matched therapist and whether the client was seen by a student therapist. Seven variables were coded with respect to basic aspects of treatment, for example, whether the patient was given medication or was seen at any time with a significant other.

Dropout was defined as a unilateral termination by the client without the agreement of the therapist. A length of stay of two or less visits was considered short-term and three or more long-term.

Results

Factor analysis was used to reduce the variable set. A principal components factor analysis was performed and a 20 factor rotated solution selected which accounted for 76% of the variance (see Table 2 for variable loadings on factors which were important in the present analyses). Factor scores for each case were computed and used in the discriminant function analyses.

Prior to further analysis 40 of the 133 cases were dropped; 39 clients had been transferred in or out of the agency, moved from the county or had records which did not permit a determination of termination status, and one case was still in progress. Of the remaining 93 cases, 60 were dropouts and 40 were terminators.

Discriminant analysis revealed that short-term dropouts (n=22) could be discriminated from long-term dropouts (n=34), supporting the first hypothesis. A canonical correlation of .525 was obtained between the resulting linear discriminant function and group membership (short- versus long-term; $F_{(2,53)} = 10.108$, $p < 0.001$, see Table 3). This function correctly classified 77% of cases. The primary significance of the analysis is the replication of the finding that dropouts are not a homogeneous group.

The second hypothesis, that short-term dropouts (n=22) would differ from long-term terminators (n=22) was supported. Discriminant analysis revealed a canonical correlation of .719 between the resulting linear discriminant function and group membership ($F_{(2,41)} = 21.918$, $p<0.001$, see Table 4). This function correctly classified 84% of cases. The factors loading highest on the linear discriminant function suggest that short-term dropouts tend to be less likely to report a disturbance

with their child, more likely to report a sleep disturbance, less likely to report a disturbance with school, more likely to report a sexual dysfunction and to be taking medication, and more likely to have a complaint longer in duration than do long-term terminators.

Finally, the comparison between short-term dropouts and short-term terminators was not supported in that the eigenvalue problem did not converge and no linear discriminant function could be computed. Given the artitrary nature of the two-session determination of short- versus long-term terminations, an analysis was performed using three sessions or less as the criterion for short-term. The expected difference between the groups was obtained with a canonical correlation of .775 between the resulting linear discriminant function and group membership ($F_{(2,39)} = 29.269$, $p < 0.001$, see Table 5). This function correctly classified 88.1% of cases. The factors loading highest on the linear discriminant function revealed that short-term dropouts (n=26) were more likely to have therapists low in community mental health ideology and high in authoritarianism, more likely to report a complaint longer in duration, more likely to report sleep problems, more likely to be seen as dependent, more likely to report a general activity disturbance and disturbance with a child, more likely to be depressed, and more likely to have been self-referred to the clinic, than were the short-term terminators (n=16).

Implications and Conclusions

Consistent with previous findings that dropouts are not a homogeneous group (Fiester et al., 1974) the present analysis suggests that short-term

and long-term dropouts do differ on several dimensions. The greater likelihood of assaultiveness among the short-term dropouts is consistent with the literature which has suggested that dropouts are perceived as a difficult group to treat (cf. Kline & King, 1973), at least when compared with their long-term counterparts. The present study also replicated the finding that short-term dropouts could be discriminated from long-term terminators, although the significance of the therapist's role in the initial interview was not supported in that comparison. When comparing short-term dropouts to short-term terminators the therapist's role seem to be of more significance as therapist variables did figure more prominently in that particular discrimination.

Some of the present findings are consistent with the suggestion that the dropout meets their treatment needs in a short-term manner (Silverman & Beech, 1979); in comparing the short-term dropouts with short-term terminators, the greater likelihood of depression among the former group may suggest the presence of an acute problem. However, the presence of a greater likelihood of dependency, a longer duration of complaint and self-referral among the short-term dropouts seems overall to be indicative of a group genuinely in need of treatment and raises the question of whether the short-term dropout is likely to be meeting their treatment needs.

In conclusion, to adequately provide support for the hypothesis that dropouts are an underserved population among community mental health centers, studies must take into account the lack of homogeneity of the dropout group, as well as the differences obtained when comparing short-term and long-term groups of terminators and dropouts without confounding dropout status with length of stay. The question of where short-term

ends and long-term begins has not received much attention but was of importance in the present study; clarification of this issue would be useful. Finally, these considerations are also important when examining the effects of interventions designed to reduce dropout as well as when attempting to ascertain the extent to which dropouts are indeed a problematic group as in, for example, client satisfaction surveys. Cross validation is planned to determine the stability of the classifications obtained in the present study.

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Table 1

CHARACTERISTICS OF SAMPLE

Admission and Complaint

Previous MH Services

38% outpatient
26% same clinic
5% inpatient

Referral Source

50% self
31% private
19% public/hospital

Severity

16% not ill to slight
45% mild
35% moderate
4% severe

Demographic

Age: 18-69; $\bar{x}$=31; s.d.=13

Sex: 29% male
71% female

Marital: 44% married/remarried
31% single
25% separated/divorced

Religion: 50% Protestant
26% Catholic
16% None
6% Other
2% Jewish

Education: 25% No H.S. diploma
31% H.S. graduates
44% some college

Income: 27% 0-2,550/year
32% 2,560-7,750/year
31% 7,750-15,550/year
10% 15,560+

Diagnostic

55% Anxiety present
54% Depression present
78% Diagnosed adjustment reaction/disorder
5% Prescribed medication

Table 2

Factor Structure of Factors Loading Highly on Linear Discriminant Functions

Factor	Variables	Loading[a]
Assaultiveness	Assaultiveness	.796
School Disturbance	Disturbance with school	.790
Therapist Ideology	Community Mental Health Ideology	.860
	Authoritarianism	-.804[b]
Sex	Female	.789
	Receives medication	-.593[b]
	Sex match with therapist	-.560[b]
Referral Source	Self referral	.910
Dependency	Dependent	.841
Depression	Suicide	.770
	Withdrawal	.522
Duration of Complaint	Duration of complaint	.605
Disturbance with Child	Seen with child	.801
	Disturbance with child	.566
Sleep disturbance	Sleep disturbance	.738
Sexual dysfunction	Sexual dysfunction	.766
	Receives medication	.532
Marital Distress	Seen with spouse	.815
	Disturbance with mate	.532
Activity impairment	Routine/leisure time impairment	.782
	Housekeeping impairment	.676

[a] Rotated solution including only variables loading greater than .50

[b] Negative loading indicates negative correlation

Table 3

Discriminant Analysis: Short-term vs. Long-term Dropouts

LDF[a]	Factor	Factor Score Means		Short-term dropouts are:
		Short	Long	
-0.77	Assault	0.13	-0.19	More likely to be assaultive
-0.49	School	0.13	-0.15	More likely to report a school disturbance
0.44	Therapist	-0.34	0.14	More likely to have therapist low in community mental health ideology and high in authoritarianism
-0.42	Sex	0.18	-0.18	More likely to be female with a same sex therapist
0.39	Referral	-0.23	0.07	More likely to be self-referred
0.39	Dependency	0.11	0.18	Less likely to be dependent
0.38	Depression	0.14	-0.11	More likely to be depressed
0.35	Duration of complaint	0.20	0.42	More likely to report shorter duration of complaint

Classification

Group	N	Predict short-term	Predict long-term
Short-term	22	13 (59%)	9 (41%)
Long-term	34	4 (12%)	30 (88%)

Correct Classification: 76.79%

[a] Canonical R = .525

Table 4

Discriminant Analysis: Short-term dropouts vs. Long-term Terminators

LDF[a]	Factor	Factor Score Means		Short-term dropouts are:
		D.O.	Term.	
0.85	Disturbance w/ child	-0.13	0.44	Less likely to have a disturbance w/ child
-0.79	Sleep disturbance	0.04	-0.38	More likely to have a sleep disturbance
0.77	Disturbance w/ school	0.13	0.50	Less likely to have a disturbance w/ school
-0.74	Sexual dysf./ meds	0.03	-0.25	More likely to have a sexual dysfunction & to receive medication
-0.74	Duration of complaint	0.20	-0.41	More likely to have longer duration
0.66	Sex	0.183	0.176	More likely to be female w/ a same sex therapist
0.55	Assault	0.13	0.34	Less likely to be assaultive
0.38	Marital distress	-0.13	0.35	Less likely to report marital distress

Classification

Group	N	Predict dropouts	Predict terminators
Dropouts	22	20 (91%)	2 (9%)
Terminators	22	5 (23%)	17(33%)

Correct Classification: 84%

[a] Canonical R = .719

Table 5

Discriminant Analysis: Short-term Dropouts vs. Short-term Terminators

LDF[a]	Factor	Factor Score Means		Short-term dropouts are:
		D.O.	Term.	
-1.15	Therapist	-0.40	-0.12	More likely to have therapists low in community mental health ideology and high in authoritarianism
1.07	Duration of complaint	0.21	-0.35	More likely to report a longer duration of complaint
0.87	Sleep	0.03	-0.45	More likely to have a sleep disturbance
0.86	Dependency	0.26	0.05	More likely to be dependent
-0.77	Activity	-0.02	-0.10	More likely to report impaired activity level
-0.72	Disturbance with child	-0.08	0.12	Less likely to report a disturbance with child
0.60	Depression	0.07	-0.54	More likely to be depressed
-0.59	Referral	-0.18	0.12	More likely to be self-referred

Classification

Group	N	Predict dropouts	Predict terminators
Dropouts	26	24 (92%)	2 (8%)
Terminators	16	3 (19%)	13 (81%)

Correct Classification: 88.1%

[a] Canonical R = .775